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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,005	03/15/2001	Edouard Viollet	EdV/MAE BET 01/0150	4582
466	7590	07/16/2004	EXAMINER	
YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			MAURO JR, THOMAS J	
			ART UNIT	PAPER NUMBER
			2143	

DATE MAILED: 07/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/808,005

Applicant(s)

VIOLET ET AL.

Examiner

Thomas J. Mauro Jr.

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6,9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,9 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 20010315.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Claims 1-6 and 9-10 are pending (as per preliminary amendment dated March 15, 2001) and are presented for examination. A formal action on the merits of claims 1-6 and 9-10 follows.

#### *Specification*

2. The disclosure is objected to because of the following informalities: Disclosure contains no headings to separate various sections, i.e. *Background of the Invention*, *Summary of the Invention*, *Description of the Drawings*, *Detailed Description*, etc. Use of such headings makes the specification easier to read. Please correct.

Appropriate correction is required.

#### *Drawings*

3. The drawings are objected to because they fail to show the necessary textual labels of the various features in Figure 5. Each element in Figure 5 must be labeled as described in the specification. A descriptive textual label for each numbered element in the figures would be necessary for one to fully understand the figures without substantial analysis of the detailed specification. Any structural detail that is of sufficient importance to be described should be shown and properly labeled in the drawings. See 37 CFR 1.84(n) and (o). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Passera et al. (U.S. 5,909,681) in view of Krum (U.S. 6,618,820).

Regarding claim 1, Passera teaches a computational data processing system, comprising:  
an assembly of networked computers (12, ...22) in each of which is stored at least one computational application [**Passera -- Figures Col. 5 lines 50-67 – Col. 6 lines 1-9 – Plurality of processors networked together, i.e. networked computers, contain at least one application, i.e. BuildModel\_Master, BuildModel\_Slave, ApplyModel\_Master or ApplyModel\_Slave,**

and a data processing machine (10) for storing computational data which is linked to the network and in communication with the computers (12, ... 22) [**Passera -- Figure 1, Col. 5 lines 64-67 and Col. 10 lines 31-38 – Data set is required and is obviously stored in a data structure on a storage device of the control/master computer. All computers belong to the network, therefore, storage is accessible to other machines], at least one of the computers (12) operating as master computer and at least some of the other computers (14, ... 22) operating**

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as slave computer [Passera -- **Figures 1 and 2 and Col. 6 lines 10-20 – System comprises both master computer and slave computer(s)**],

characterized in that at least one of the computers (12) comprises, stored in memory, an algorithm for configuring the other computers of the network as slave computers and an executable master application for managing the tasks of each slave computer [Passera -- **Figures 3, 13, 16 and 17 and Col. 6 lines 1-9, lines 21-29, lines 38-67 and Col. 9 lines 23-57 – Both master and slave computers store and execute the appropriate application for configuring themselves to execute processes on a data set when directed by the master**] and of corresponding computational data which are stored in the storage machine (10) [Passera -- **Figure 1, Col. 5 lines 64-67 and Col. 10 lines 31-38 – Data set is required and is obviously stored in a data structure on a storage device of the control/master computer**].

Passera fails to explicitly teach managing tasks of the slave computers as a function of their availability for the assignment.

Krum, however, discloses a processing system for servicing computational tasks which uses availability and processing time to decide which slave will process a given task [Krum -- **Col. 2 lines 53-61 and Col. 3 lines 6-31**].

Both Passera and Krum are concerned with splitting up data processing computation tasks between multiple slave computers with a managing master.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the splitting up of tasks for processing based upon availability and processing time, as taught by Krum, into the invention of Passera, in order to provide better and more efficient handling for high demand jobs and faster processing and completion of tasks.

Regarding claim 2, Passera-Krum teach the invention substantially as claimed, as aforementioned in claim 1 above, including a system characterized in that the said configuring algorithm and the said master application are loaded into the network computers, the execution of the said configuring algorithm constitutes a means for configuring the computer as a master **[Passera -- Figure 3, Col. 6 lines 1-20 and Col. 6 lines 38-67 – Col. 7 lines 1-32 – BuildModel\_Master program code is executed on the machine, which is to be assuming the role of Master in the system, in order to configure the machine for its role as master]**.

Regarding claim 3, Passera-Krum teach the invention substantially as claimed, as aforementioned in claim 2 above, including a system characterized in that each computer furthermore comprises an executable slave application under the control of the master computer (12) when this computer is configured as slave, for the local management of the computational application **[Passera -- Figure 13, Col. 6 lines 1-9, Col. 9 lines 23-29, Col. 9 lines 42-67 – Col. 10 lines 1-27 and Col. 11 lines 14-49 – Each slave contains program code, i.e. BuildModel\_Slave and ApplyModel\_Slave, to configure the slaves and to control the execution once the data set is sent to a slave for processing]**, the said slave application comprising software means for talking to the storage machine (10) **[Passera -- Figure 1, Col. 5 lines 64-67 and Col. 10 lines 31-38 – Data set is required and is obviously stored in a data structure on a storage device of the control/master computer. In order for the slaves to receive, process and store data, they must contain code to “talk” to machine housing data set]**.

Regarding claim 4, Passera-Krum teach the invention substantially as claimed, as aforementioned in claim 3 above, but fails to explicitly teach using the file transfer protocol (FTP) for exchanging data.

The use of FTP for transferring files from a client to a server was notoriously well known and obvious in the art. This protocol is commonly and extensively used throughout the world of networking for transferring data from one machine to another.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of FTP for exchanging data into the invention of Passera-Krum in order to provide a fast, easy and well-known protocol means for transferring information/data between machines.

Regarding claim 6, Passera-Krum teach the invention substantially as claimed, as aforementioned in claim 1 above, including a system characterized in that the configuring algorithm comprises software means for formulating a man/machine interface (24) suitable for display on a screen of each computer for the configuring of the said computers [**Passera -- Figure 1, Col. 5 lines 50-67 – Col. 6 lines 1-9, Col. 6 lines 38-42 and Col. 11 lines 26-28 – Code which is used to develop neural network and provide training is required and therefore was obviously created by a user using an interface. Thus, software used to code the programs, i.e. BuildModel\_Master, etc. was used to display the code and provide the resources for the developer to code the program, namely, the man/machine interface**].

6. Claims 5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Passera et al. (U.S. 5,909,681) and Krum (U.S. 6,618,820), as applied to claim 1 above, in view of Weiss et al. (U.S. 6,071,190).

Regarding claim 5, Passera-Krum teach the invention substantially as claimed, as aforementioned in claim 1 above, but fail to explicitly teach having a signature and comparing the signature of a message from the slave with the signature of a master.

Weiss, however, discloses a system which imposes security on both master and slave devices by using a unique signature to discern the validity of messages between a master and slave device **[Weiss -- Col. 10 lines 35-50]**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a unique signature for imposing security between communications of master and slave devices, as taught by Weiss into the invention of Passera-Krum, in order to provide security for processing commands so that the validity of each command would be determined to prevent the illegal or wrongful issuing of processing commands by hostile or unauthorized machines.

Regarding claim 9, Passera-Krum-Weiss teach the invention substantially as claimed, as aforementioned in claim 1 above, including:

defining at least one group of computers by configuring for each group a computer (12, ... 22) as master computer and other computers as slave computers **[Passera -- Figures 1 and 2 and Col. 6 lines 10-20 – System comprises both master computer and slave computer(s)]**;



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assigning, to each of the slave computers, one or more computational applications and corresponding computational data [**Passera -- Col. 6 lines 1-9, Col. 9 lines 42-47, Col. 10 lines 31-38 and Col. 11 lines 14-24 -- Each slave computer executes both a BuildModel\_Slave and ApplyModel\_Slave program to process data set**];

comparing an electronic signature sent by each slave computer to the master computer with a corresponding signature stored in the latter; and in the case of correspondence between the said signatures [**Weiss -- Col. 10 lines 35-50 -- Electronic signature of message, i.e. data, sent from a master/slave is compared to that stored in the master/slave to discern the validity of the message or data**];

running, for each slave computer, the computational application or applications as a function of their availability, using the corresponding computational data [**Krum -- Col. 2 lines 53-61 and Col. 3 lines 6-31 -- Tasks are processed by the slave computers based upon the availability of a processor to complete a task the soonest and/or within a given time frame**]; and

retrieving the data resulting from the execution of the applications carried out in parallel, in each slave computer [**Passera -- Col. 5 lines 54-56 -- Workstation receives output data after tasks are carried out by slave processors, i.e. computers**].

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Passera et al. (U.S. 5,909,681), Krum (U.S. 6,618,820) and Weiss et al. (U.S. 6,071,190), as applied to claim 9 above, in view of Colyer et al. (U.S. 6,151,621).

Regarding claim 10, Passera-Krum-Weiss teach the invention substantially as claimed, as aforementioned in claim 9 above, but fail to explicitly teach using the model for the computation of molecular models on stored molecular data.

Colyer, however, discloses master/slave processing system which can be used as an application to compute three-dimensional molecular models [**Colyer -- Col. 10 lines 45-49**].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the system as an application to compute three dimensional molecular models, as taught by Colyer into the invention of Passera-Krum-Weiss, in order to extend the system for use in computational intensive applications which require the necessary processing power generated by the aforementioned system.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Wesemann (U.S. 6,434,594) discloses a system and method for distributing the execution of applications among one or more computational resources over a network.

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- Bessette (U.S. 6,263,330) discloses a client/server system for performing processing of patient medical records distributed over a network.
- Lee et al. (U.S. 6,609,127) discloses a master/slave controller environment upon which the master controller issues commands for the slaves to carry out.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Mauro Jr. whose telephone number is 703-605-1234. The examiner can normally be reached on M-F 8:00a.m. - 4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 703-308-5221. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TJM  
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